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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,428	01/18/2006	David Richard Hallam	CAF-207-A	7603
48980	7590	03/14/2008		
YOUNG & BASILE, P.C. 3001 WEST BIG BEAVER ROAD SUITE 624 TROY, MI 48084			EXAMINER CHIESA, RICHARD L	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 03/14/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@youngbasile.com  
audit@youngbasile.com

**Office Action Summary****Application No.**

10/565,428

**Applicant(s)**

HALLAM, DAVID RICHARD

**Examiner**

Richard L. Chiesa

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date April 26, 2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. The drawings filed on January 18, 2006 are accepted by the examiner.

### ***Specification***

3. The abstract of the disclosure is objected to because the reference numerals are not enclosed within parentheses. Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities: (A) The specification apparently fails to indicate that this case is the national stage of International Application No. PCT/GB04/03140, filed on July 19, 2004. (B) The reference to claim 1 on the first line of paragraph [0040] is improper and should be deleted. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-18 are indeterminate because the expression "preferably" at the beginning of line 15 in claim 1 is ambiguous and should apparently be deleted. Furthermore, there is apparently no antecedent basis for the expression "the aircraft air recirculation system" on the last line of claim 14. Finally, it is noted that the parentheses enclosing "starting" (claim 8, line 2) should apparently be deleted.

***Claim Rejections - 35 USC § 102/103***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, and 11-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over German Patent No. 29808126 to

Euromedico. Euromedico (note Figure 1) discloses an air filtration apparatus and process with a prefilter 4, ozone generator 6, and replaceable downstream electrostatic filters 11 which provide high airflow because their longitudinal axes are parallel to the airflow (note page 3, lines 18-24, and page 6, line 8 to page 7, last line of the English language translation) as claimed (35 USC 102b). It would appear that Euromedico may not explicitly mention that the ozone generator is a low power corona discharge. However, Euromedico does state that the ozone generator is an ionization zone. A corona is a region of ionized gas and it is inherent or at least would have been readily obvious to one having ordinary skill in the art (35 USC 103a) in view of Euromedico's discussion that Euromedico employs a corona for producing ozone.

9. Claims 1-5, 7-9, and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Euromedico in view of Great Britain Patent No. 2358350 to Hallam et al. Euromedico, as described above in paragraph 8, discloses an air filtration apparatus and process substantially as claimed. However, Euromedico may not explicitly state the use of a low power tubular corona discharge ozone generator. In any case, Hallam et al (note Figure 3) teach the well-known use of a low power tubular corona discharge ozone generator 19 in an air filtration apparatus and process for the purpose of enhancing bactericidal effect (note pages 2 and 3). Consequently, it would have been obvious to one of ordinary skill in the art to employ a low power tubular corona discharge ozone generator in the Euromedico air filtration apparatus and process in order to increase bactericidal effect as taught by Hallam et al.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of U.S. Patent No. 5,656,063 to Hsu. The prior art, as described above in either one of paragraphs 8 or 9, discloses an air filtration apparatus substantially as claimed with the possible exception of a supply frequency between 50 and 1000 Hz. In any case, Hsu (note col. 5, lines 50-60) teaches the use of a 60 Hz frequency in an air filtration apparatus for the purpose of ensuring optimum ozone generation and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in either one of the prior art air filtration devices described above.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of U.S. Patent No. 2,841,242 to Hall. The prior art, as described above in either one of paragraphs 8 or 9, discloses an air filtration apparatus substantially as claimed with the possible exception of an array of ozone generators arranged across the airflow path. In any case, Hall (note ref. num. 30, Figure 1) teaches the well-known use of ozone generators distributed across the airflow path in an air filtration apparatus for the purpose of ensuring maximum ozone dispersal (note col. 1, line 67 to col. 2, line 2) and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in either one of the prior art air filtration devices described above.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references have been cited as art of interest to show other air filtration systems.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (571) 272-1154.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane S. Smith, can be reached at (571) 272-1166.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (571) 272-1700.

Facsimile correspondence must be transmitted through (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Chiesa  
February 28, 2008

**/Richard L. Chiesa/  
Primary Examiner  
Art Unit 1797**